

## METHODS

The primary charge to the Commission on Research at Emory was to recommend ways to strengthen research at Emory and to improve its research support. To accomplish this, the commission was given four themes for closer analysis: content and nature of research, people who conduct the research, support for research, and the cultures and values of research. Specific topics related to these themes included a typology of research at Emory; comparisons with peer institutions; strategies for rewarding, motivating, and retaining scholars at Emory throughout their career cycle; review of the infrastructure to ensure high quality research; impact of external forces on research at Emory; meanings and forms of intellectual community at Emory; and appraisal of ethical values and research at Emory.

The commission's work was conducted in two phases. The primary focus of Phase I was on data collection through a wide range of methods. Phase I also served as an alternative self-study for Emory's reaccreditation by the Southern Association of Colleges and Schools and resulted in a report to the reaccreditation committee. Phase II involved continued data collection and consensus building through feedback on the draft report from the numerous stakeholders. Methodological issues relevant to each of the two phases will be described.

### PHASE I:

#### EXPLORATORY PHASE AND INITIAL DEVELOPMENT OF RECOMMENDATIONS

The data collection focused on the four main themes, which are described below.

#### *Content and Nature of Research at Emory*

To gain a better understanding of the content and nature of research at Emory, the commission developed a matrix capturing measurable dimensions of the cultures of research across the university. The matrix distinguished between faculty responsibilities regarding scholarship, teaching, and service. Data were collected either at the department or at the school level for those units that do not consist of departments. Measures of research productivity included the number of monographs, anthologies, edited books,

textbooks, handbooks, journal articles, book chapters, reviews, published abstracts, citations, and the artistic equivalent of such publications; the number of presentations at professional meetings; the number and size of internal and external grants; and the number and types of honors and awards received by Emory scholars. Teaching-related items included the number of undergraduate and graduate students taught during the most recent academic year; the number of undergraduate and graduate students; and the number of honors students, postdoctoral fellows, and medical residents. For service activities, a distinction was made between service to the profession, to the department, school or university, and to society at large. To achieve some standardization, all measures were linked to the number of full-time equivalent faculty positions.

The matrix data have several weaknesses. First, some departments and deans offered less extensive information than others, so data are sometimes missing. Second, the accuracy of the responses varied. For example, for grants with multiple investigators, some units counted a grant only in the department of the principal investigator, while others listed it as an accomplishment for all involved departments. Third, comparisons are difficult to make due to the wide variety of scholarly products—for instance, developing standardized evaluations for a book versus a brief research article, a new medical intervention, or a theatrical performance poses a major challenge.

As a supplement to the matrix information, the commission collected additional qualitative data. Respondents, either at the department or school level, were asked to provide a one-page description of their local culture of research, including a listing of subfields, the various modes of inquiry, the organization of research activities, the available research infrastructure, and the collaborative nature of the research, scholarly products, and funding needs. Data were collected either as a written narrative provided by the respondents or recorded verbatim during phone and face-to-face interviews. Multiple data collection formats were used to increase the response rate to the qualitative data collection, which remained low at 33 percent.

The Offices of Strategic Development and Institutional Research provided data on peer institutions. This information included findings from previously conducted studies on research at Emory and its peer institutions, visits to other institutions con-

ducted by the vice president for strategic development and members of the Office of the Provost, and a review of available data sources such as those from the Association of American Universities, National Science Foundation, National Institutes of Health, Association of American Medical Colleges, Association of Research Libraries, Consortium on Financing Higher Education, Association of University Technology Managers, *Chronicle of Higher Education*, and the websites of peer institutions.

### ***Researchers at Emory***

Institutional information from the Office of Research Administration was used to gain insight into researchers at Emory. Whereas this office maintains extensive records of externally funded research and to a lesser extent of internally funded projects, no records are kept for scholarship for which no funding is received.

A survey was designed to gain data on factors that play a role in the recruitment of new faculty and the retention of current faculty, including the support for faculty's research activity. The web survey was submitted to 112 individuals, the majority of whom were department chairs, and yielded a response rate of 51 percent. Response rates varied across campus: nursing, 100 percent (2/2); law, 100 percent (1/1); Oxford, 75 percent (3/4); theology, 75 percent (3/4); Emory College, 69 percent (18/26); public health, 67 percent (4/6); medicine, 40 percent (25/63); and business, 33 percent (2/6). Hiring practices were measured using a five-point Likert scale ranging from essential to not applicable. The scale covered departmental considerations such as strategic priorities for growth and availability of resources, as well as candidates' strengths. An additional item was hiring intentions, including the rank and nature of the appointment.

Measures related to research effort included the average percentage of time committed to research activities per faculty member, the value of specific research products, a ranking of the three most significant indicators of research success, external funding expectations and the importance of funding source, access to sabbaticals and other forms of research leave, and funding for professional travel and publications.

Data also were collected on faculty retention and recruitment. Faculty retention was assessed using a five-point Likert scale (ranging from essential to not important) covering items such as

teaching load, expectations for service involvement, space availability, status of computing resources, access to statistical and data management support, involvement with a critical mass of colleagues who share similar interests, graduate students and post-doctoral fellows, flexible working hours, salary adjustments, and one-time financial support. The two recruitment-related items included start-up resources and spousal relocation assistance. An additional retention-related measure was the number of faculty who left Emory, including their reasons for leaving. Open-ended questions addressed barriers to hiring, methods for evaluating research accomplishments, policies for allocation of funding, and any additional comments.

The survey data were supplemented by data from faculty hearings. Ten faculty hearings were organized and clustered around cultures of research (i.e., humanities, sciences, social sciences, and professional schools) and geographical location (i.e., main campus, Oxford campus, and Grady Memorial Hospital). Approximately 450 faculty members attended these hearings. Attendees covered such topics as Emory's current rewards for research productivity; comparisons for research rewards versus those for other academic responsibilities; ways to improve rewards for research, teaching, and service; and the extent to which the environment at Emory is conducive to research—and suggestions to improve this environment.

### ***Infrastructure Support for Research at Emory University***

The faculty hearings described above also focused on infrastructure support. Specific topics included the current condition of infrastructure support for research at Emory; suggestions for improving this infrastructure and eliminating existing barriers; an assessment of computing resources, information technology, library resources, academic bookstore, and places for intellectual exchange; the nature of collaborative/interdisciplinary research at Emory; and strategies to cope with changing and (e)merging cultures of research.

In addition, a web-based survey was submitted to the dean's offices of all schools. Data were collected on the types of appointments and associated hard money, salary recovery mechanisms, teaching reduction mechanisms, and policies for sabbaticals and other research leaves. The response rate was 100 percent.

The third data collection strategy involved in-depth, face-to-face interviews with representatives from the library, information services, and the research administration. The latter includes the Office of Sponsored Programs, Office of Grants and Contracts (now merged with the Office of Sponsored Programs), Office of Technology Services, and Office of Research Compliance. These interviews focused on the strengths, weaknesses, and proposals for improvements to the research administration infrastructure, libraries, and information services. Other topics such as the intellectual property policy, patents and licenses, start-up companies, and collaborations with other local colleges and universities were discussed when appropriate. A total of eighteen such interviews were conducted.

Interviews also were conducted with five faculty members who hold key positions on the Institutional Review Board, Institutional Animal Care and Use Committee, and University Research Committee. Members of the various review committees of the University Research Committee as well as recipients of internal funding were interviewed either as a group or individually, resulting in a sample size of sixteen individuals. Finally, informal open-ended interviews were conducted with fifteen scholars who were known for their extensive externally funded research portfolios.

### ***Culture and Value of Research***

The culture and values of research were explored through the lens of ethics. Data were collected through an extensive literature review, a review of completed and ongoing relevant studies conducted by Emory's Offices of Institutional Research and Strategic Development and the Center for Ethics in Public Policy, in-depth interviews with faculty administrators involved with human subject protection, and a faculty hearing about the current situation and additional needs for training in research ethics and the intellectual community at Emory. Finally, numerous informal conversations were held with faculty from across the university.

## PHASE II:

### CONSENSUS BUILDING AND FINAL REPORT

In October 2002 the commission submitted its findings, including draft recommendations, to the Offices of the Provost and President. Simultaneously, the draft was submitted to the Southern Association of Colleges and Schools and posted on the Emory website.

Internal feedback on the report was sought from a wide range of stakeholders. Presentations were made to the president, interim provost, Board of Trustees, Administrative Council, Council of Deans, Faculty Council, and various other groups of constituents such as the Council of Chairs in the School of Medicine and a general faculty meeting of Emory College.

In addition, external advice was provided by consultants whose expertise covered the various cultures of research at academic settings, research administration and infrastructure, and higher education in general. These consultants met with members of the commission as well as other faculty from across the university (see Appendix C for more information about the external consultants).

One of the most significant aspects of Phase II involved visits by commission members to department-wide and schoolwide meetings. An invitation was extended to all departments and programs to present and discuss the draft report, including the principles and recommendations, with commission members. A total of eighteen such meetings took place, the majority of which were with departments in Emory College. In addition, a schoolwide meeting was organized for nursing, the Oxford campus, and the chairs in medicine. No feedback sessions were held with three of the professional schools (business, law, and theology), despite invitations to join the dialogue. To compensate for missing data, informal meetings were held with faculty from the remaining departments in Emory College and the professional schools. In addition, numerous faculty communicated with members of the commission through email. During Phase II, the commission members interacted with 250 faculty members who provided feedback.

Based on the feedback on the draft report and additional information gathered during the consensus-building phase, a subgroup of commission members conducted a content analysis and revised the guiding principles and recommendations as well as the associated narrative.